



Cold Climate Housing Research Center

CCHRC

PROGRESS REPORT

GRANT NUMBER: 7310026

COLD CLIMATE HEAT PUMP DEMONSTRATION

COLD CLIMATE HOUSING RESEARCH CENTER

4/1/2013 – 6/30/2013

Deliverables Submitted

There were no deliverable submitted this quarter.

Budget

Amount Invoiced: \$

Schedule Status

We had to revise our schedule for the heat pump installation, due to the schedule for the building addition and our contractor's summer installation schedule. The heat pump itself will be installed after the completion of the building addition in August 2013.

Percent Complete

	Start Date	End Date	Percent Complete
Thermal Response Test	Sep-12	Oct-12	100%
Heat pump system design	Nov-12	Mar-13	100%
Update monitoring plan	Nov-12	Mar-13	100%
Ground loop installation	Jun-13	Jul-13	100%
Heat pump installation	May-13	May-13	10%
Data acquisition system installation	Jun-13	Aug-13	20%
Commissioning	Sep-13	Sep-13	N/A
System monitoring and maintenance Year 1	Sep-13	Sep-14	N/A
System monitoring and maintenance Year 2	Sep-14	Sep-15	N/A
System monitoring and maintenance Year 3	Sep-15	Mar-16	N/A
Data analysis, LCCA, and draft report completion	Apr-16	Jun-16	N/A
Final project report	Jul-16	Jul-16	N/A

Work Progress

Ground Loop Installation – The ground loop is installed and piped back to the building. Pictures of the installation are appended to this document.

Heat Pump Installation – Installation of the heat pump is on hold until the construction on the building addition is more complete. The mechanical room is almost ready for the heat pump, space has been set aside and plans are in the works for how the new system will be incorporated.

Data Acquisition System Installation - Parts of the data system have been installed in the ground loop. Additionally, all of the sensors have been ordered and received. The data system is ready to be installed once we start installing the heat pump.

Future Work

The installation of the interior components and the data acquisition system are the next steps. The final installation will take place as schedules allow.

Photographs of the ground loop installation:



Figure 1. Installing the first slinky coil.

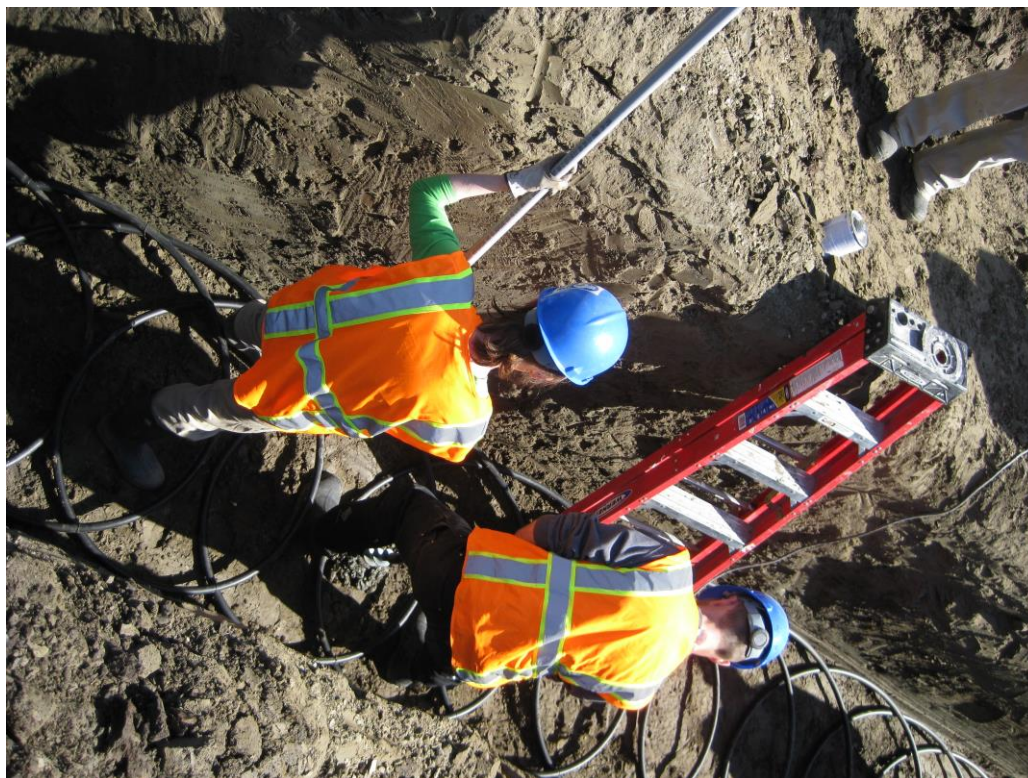


Figure 2. Installing pipes for ground temperature sensors.



Figure 3. Digging the final trench for the slinky loops.



Figure 4. Piping running back to the building.